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## REVIEW OF *2016 BROWN CENTER REPORT ON AMERICAN EDUCATION – PART II: TRACKING AND ADVANCED PLACEMENT*

Reviewed By

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### Summary of Review

This report uses state-level data from the National Assessment of Educational Progress to describe a positive association between tracking in eighth grade and the proportion of students passing AP exams in high school. The relationship is moderately strong and holds true for White, Black, and Hispanic students. The report suggests that the separate learning environments for high achievers created by tracking are important for providing students (including students of color) with the skills and knowledge to succeed with the most demanding coursework offered in high schools. The findings are based on correlations and cannot establish a causal relationship, nor can they identify what mechanisms might be at work. However, they are consistent with prior research that has frequently (although not always) identified benefits of tracking for high-achieving students. A key weakness is that the report neglects to consider how tracking is likely to affect lower-achieving students. Tracking is often implemented in ways that hinder the learning of students assigned to low tracks. Because disadvantaged and minority students are disproportionately assigned to low tracks, the report's conclusion that tracking could be "a potential tool for promoting equity" is dubious.



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# REVIEW OF 2016 BROWN CENTER REPORT ON AMERICAN EDUCATION – PART II: TRACKING AND ADVANCED PLACEMENT

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## I. Introduction

This review considers Part II of the 2016 Brown Center Report written by Dr. Tom Loveless and published by the Brookings Institution.<sup>1</sup> This section of his report provides a broad history of educational tracking – the practice of grouping students according to perceived ability or achievement into different classes – and presents a new analysis that examines the relationship between tracking in eighth grade and successful participation in Advanced Placement courses in high school.

The practice of tracking is very common in American high schools. A typical comprehensive public high school will offer two or more classes in core subjects in a given grade. For example, a school might offer courses in Geometry, Algebra, and pre-Algebra to its ninth grade students. Students can often choose which courses to enroll in, although these choices are generally restricted by factors such as prerequisite courses, graduation requirements, and scheduling logistics. Advanced Placement (AP) courses are among the most demanding courses offered. According to the College Board, which created and manages the AP program, the courses “give students access to rigorous college-level work.”<sup>2</sup> Near the end of the school year, students have the opportunity to take an AP Exam. Many colleges and universities offer incoming students course credit based on these test scores. There is a fee to take the exam, so not all students participate. In 2016, the fee was \$92 per exam, although the College Board offers discounts to low-income students<sup>3</sup> and some school and community programs exist to help disadvantaged students pay these fees.

Despite its common use, tracking is controversial. Dividing students into different classes allows customized instruction to be offered to students with different levels of preparation. Talented students can progress more quickly, and students that require more help and explanation can receive it. However, critics of the practice argue that it limits the learning opportunities of students assigned to low-ranking tracks. Students in low-track classes cover less material and spend less time on task. Instruction in low-track classes tends to emphasize memorization and simple problem solving, whereas instruction in high-ranking tracks is more likely to include an emphasis on critical thinking skills and complex analysis.<sup>4</sup> This is true even when the same teacher instructs classes of different levels.<sup>5</sup> Assignment to a low-ranking track can attach a stigma to students, and potentially lead them to lose confi-

dence in their abilities and reduce motivation. Surveys suggest that students in low tracks have substantially more negative views of themselves both academically and generally, and have lower educational expectations than those in higher tracks.<sup>6</sup> Teachers may also have lower expectations for low-track pupils.<sup>7</sup> Because poor and minority students are more likely to be assigned to low tracks, there is concern that the practice of tracking increases educational inequality.

This report argues that tracking in eighth grade creates opportunities for talented students to access a challenging curriculum that prepares them for the rigorous demands of AP coursework in high school. Successful completion of AP coursework and good scores on the AP exams improve students' chances of college acceptance.

## II. Findings and Conclusions of the Report

The primary research question of this report is “Were state tracking practices for eighth graders in 2009 related to AP outcomes in 2013?” The answer is “Yes” – states where more schools tracked in eighth grade saw more students passing AP exams in high school four years later. Enrollment in AP classes was not affected by tracking, but passing rates did improve. An increase of 10 percentage points in eighth grade tracking is associated with a two percentage point increase in high-performing AP students. If this ten percentage point increase in tracking were implemented across the country, the analysis suggests an additional 20,000 students would pass AP exams.

The report argues that, because Black and Hispanic students have historically been disproportionately assigned to low tracks, schools that serve large numbers of these students are less likely to offer tracked classes. The author is concerned that “If tracking and accelerated coursework in eighth grade represent the beginning of a pipeline for promising young stars in mathematics or literature, that opportunity is more open to White and Asian students in suburban schools than to disadvantaged youngsters in schools serving students of color.”

## III. The Report's Rationale for Its Findings and Conclusions

Using state-level data from the National Assessment of Educational Progress, the report identifies a correlation between the percentage of students tracked in eighth grade and the percentage of students that passed AP exams in high school four years later. The association between eighth grade tracking and student success on AP exams in high school is moderately strong and consistent among White, Black, and Hispanic students. The relationship also holds after controlling for poverty and a measure of high academic achievement among eighth graders. Also, there were no statistically significant relationships between tracking and AP enrollment. This suggests that earlier tracking did not change the selectivity of AP

classes – meaning they were not restricted to higher-achieving students in states where eighth-grade tracking was more common.

#### IV. The Report's Use of the Research Literature

Although the literature on tracking is extremely broad and deep, the author chooses to focus on a small number of recent, generally high-quality studies. Among these, the randomized experiment executed by Duflo et al.<sup>8</sup> and the natural experiments studied by Nomi<sup>9</sup> and Card and Giuliano<sup>10</sup> merit particular attention. The Duflo et al. study in Kenya provides a compelling proof-of-concept demonstrating that between-class achievement-based tracking can benefit all students when implemented properly. However, how the practice was implemented in controlled conditions differed in important ways from how it is often implemented at scale. For example, in the experiment, teachers were randomly assigned to teach higher- and lower-achieving classes, whereas in the United States, teachers assigned to teach low-track class often have less experience and fewer credentials. In the experiment, students were assigned on the basis of test scores, whereas access to higher-track classes is often restricted due to additional structural barriers, such as required prerequisite courses, teacher recommendation, or permission from counselors.

An updated version of the study by Card and Giuliano is now available, and it provides perhaps the best available evidence that tracking can be implemented in a way that benefits high-achieving students without harming low achievers. In this instance, a large urban school district established separate classrooms for the highest-achieving fourth- and fifth-grade students if even a single gifted student was identified in a school-wide cohort. Assignment to one of these high-track classes was associated with substantial learning gains for non-gifted students, while the learning outcomes of students left in regular classes were unchanged. Perhaps most interesting, the learning gains achieved in the high-track classes were concentrated among African-American and Hispanic students. These findings lend credence to Loveless' suggestion that opportunities to attend high-track classes earlier in their educational careers might be a potential avenue to “increasing the numbers of students of color who not only take AP courses but also score extraordinarily well on AP tests.”

The principle omission for the review of the literature – and the report as a whole – is that it neglects to consider the effects of tracking on low-achieving students. While there is considerable evidence that tracking is beneficial for high-achieving students, there is at least as much evidence that it hinders the learning of students assigned to low tracks. Evidence for negative effects of tracking on the learning outcomes of low-ranked students is found in ethnographic observations of classrooms,<sup>11</sup> research using large-scale national survey datasets,<sup>12</sup> and international comparisons of educational systems.<sup>13</sup>

The report acknowledges these concerns, but spends very little time engaging the long history of empirical literature demonstrating the harmful effects of tracking on students that are already low-achieving. The author does cite a “trade off” predicted by Fu and Mehta<sup>14</sup> where

modest gains for high-achieving students are offset by losses among low-achieving students. But the focus of the literature review in the report is recent research that has shown positive effects for high achievers. Recent research that shows more ambiguous effects of tracking (such as evidence from Chicago that tracking increased both test scores and course failures for high-achieving students)<sup>15</sup> is also not considered.

## V. Review of Report's Methods

The analysis presented in this section is straightforward, and the statistical methods are very simple. It uses state-level data to demonstrate a correlation between greater prevalence of tracking in eighth grade and the proportion of students later passing AP exams in high school. The use of state-level data limits our ability to draw conclusions about a practice that is implemented at the school level and affects achievement outcomes of individual students. The author admits that “the analysis cannot prove or disprove that tracking caused the heightened success on AP tests.” The results of the analyses are at least consistent with, and perhaps suggestive of, a process in which tracking in eighth grade puts high-achieving students on a path to mastering the more demanding coursework in high school.

If minority students are to benefit from tracking in this way, it is important that they have access to AP coursework in high school. The report does not present data on AP enrollment rates by race, but some information is available from the College Board for 2013. It shows that, while White and Hispanic students are enrolled in AP courses at fairly representative rates, African-American students are under-represented. Black students made up 14.5% of the graduating class in 2013, but only 9.2% of Black students were enrolled in AP classes, and only 4.6% passed an AP exam that year.<sup>16</sup> Loveless argues that “AP has dramatically increased the participation of Black and Hispanic students in the past decade – and continues to push for greater participation” so analysis that focuses on states where larger numbers of minority students took the test “are probably better indicators of future statistical relationships.” This may be true, but the Black-White gap in achievement has proven stubbornly resistant to change over the last decade. Unless achievement disparities diminish, or African-American students are better able to access higher-track classes despite lower average achievement, it is difficult to argue that tracking is a prudent avenue to improve academic outcomes for these students.

## VI. Review of the Validity of the Findings and Conclusions

The findings of this report are convergent with other literature that has found tracking to be beneficial for high-achieving students, including prior work by Loveless that showed tracking in Massachusetts was associated with greater numbers of students reaching advanced proficiency levels and fewer students failing state-level standardized tests.<sup>17</sup>

The effects of tracking in any given school depend on a variety of circumstances, including the particular backgrounds and amount of heterogeneity among the student body, assignment criteria and degree of flexibility in assignments, and the support offered to students in each of the different tracks. Some detracking reforms have been made successfully without hindering high-achieving students,<sup>18</sup> while others have encountered difficulties.<sup>19</sup> The preponderance of available evidence suggests that, unless tracking systems are implemented carefully and coincide with substantial supports for struggling students, students assigned to low-ranking tracks are likely to be harmed. As disadvantaged and minority students are nearly always disproportionately assigned to lower tracks, this can exacerbate existing educational inequalities.

## VII. Usefulness of the Report for Guidance of Policy and Practice

The principal argument of this report – that tracking can be beneficial to high-achieving students – is supported by both the new analysis and existing literature. However, it only tells half the story. Opposition to tracking is driven by concerns that it harms low-achieving students, particularly disadvantaged and racial minority students that are invariably disproportionately assigned to low tracks. Studies comparing high-track and low-track classrooms indicate that when the curriculum varies with track, students in low-track classes learn less than students in the higher tracks.<sup>20</sup> This report does not offer any new information on how tracking might affect low-achieving students or how it might be implemented in a way to mitigate potential harms. Current accountability frameworks often demand improvements in achievement for all students, so administrators and policymakers would do well to consider all of the potential effects of tracking and not limit their focus to students who are currently high achievers.

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